

**Research Article**

**Model laying out of effective factors in human force productivity at region of  
army staff of medical science university of Kermanshah**

**Abol Hassan afkar<sup>1,2</sup>, Behrouz soltany<sup>3</sup>, Seyedeh Hoda Mousavi<sup>4</sup>,**

**Hossein Mozafar Saadati<sup>5</sup>, Nasim Hatefi\_Moadab<sup>4</sup>**

**Mohsen Mohammadi<sup>4</sup> and Afshin Esfandnia<sup>6</sup>**

<sup>1</sup>School of Health, Guilan University of Medical Sciences, Rasht, Iran

<sup>2</sup>Social Determinants of Health Research Center,  
Guilan University of Medical Sciences, Rasht, Iran

<sup>3</sup>Kermanshah University of Medical Sciences, Kermanshah, Iran

<sup>4</sup>Student Research Committee, Kermanshah University of Medical Sciences, Kermanshah, Iran

<sup>5</sup>Phd student of Epidemiology Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>6</sup>Kermanshah University of Medical Sciences,  
Kermanshah, Iran (corresponding Author)

**ABSTRACT**

It is tried to study different models of human force productivity and lay out a comprehensive model for human force productivity in this research. It is a descriptive – analytic and correlating research which has been done periodically in 1393. Data was collected by the researcher-made questionnaire which was assessed by instructors and experts' ideas. Its permanency was also estimated desirable by using a pilot model of 30 people and Keronbach Alpha test equaling to 769. Data was analyzed by spss21 software. Statistical community was the total staff of region of army staff of medical science of Kermanshah (290 people) and the volume of sample was estimated equally 165 people by Cocran formula. The results showed there is a meaningful and positive relation between productivity aspects and productivity. There aren't any relations between training aspect and human resource improving and productivity aspects, either. Achievements show high and positive correlating and ability of model that is useful and practical.

**Keywords:** productivity, human resource

**INTRODUCTION:**

In the targeting view, human resource improvement means “making human able for better quality of life, individual, social and human life.”(1) Productivity improvement can cause process improvement, work relation improvement, improvement of individual and group behavior, work motivation increase, life quality increase, convenience increase, employment increase, income and payment increase ( for the reason of production and profit improvement in the organization).(2) productivity is described as working use of resources ( function, capital, land,

material, energy and information) to produce goods and services and it's described as a relation between function results and duration of it, too.(3) Productivity is one of the factors which guarantees durability and permanence of organizations in this competitive world. Governing of productivity culture causes the best use of the whole material and moral facilities and growing abilities, intelligence and potential facilities of organization.(3) \_International and local organizations such as Work International Organization explains that different products are

produced by combination of four basic factor-land, capital, function and organization. These factors ratio to production is a criterion to examine productivity. Europe Productivity Agency also knows productivity as the degree of effective use of each production factor and they believe that productivity is a conceptual view which always wants to improve something which is existing now. Japan Productivity Center believes that the target of productivity improvement is to maximize using of resources, human force, facilities and etc. in a scientific method and with decrease of production expenses, marketing increase, employment increase, effort for increasing real incomes and improvement of life criterion how are useful for employees, managers and users.(4) In Iran National Productivity Organization's opinion, productivity is an intellectual idea for work and life. It's similar to a culture that its aim is making the activities wiser for a better and exalted life.(5) There are a lot of problems in organizations which show the importance of productivity improvement in organizations such as dissatisfaction signs, increase of references to organizations, not doing their needed services, long delay in responding to their necessity, numberless employees who are aimless and wandering in different rooms of officialdom, and or many capacities without operators,...On the other hand, based on the published information, it has been expressed in the mass media that the total hours of weekly official work of organizations are 52 hours( 44 official hours and 8hours weekly overtime work);But profitable work is done only for 4hours and 22minutes.In other words, employees of these organizations work even less than 8hours over time a week. It's even claimed that the average work of government employees is one hour and the average work of industry is 2hours, while the average profitable work in London is 6hours and 15 minutes, in Portugal 8hours and 20 minutes, and totally in European countries 7hours and 20minutes.(6) Nowadays, the productivity increase in organizations is one of the main disturbances of executive managers and determiners of each

country, as most of countries have based their main improvement plan on productivity increase, as the productivity increase has been 45 times in all over the world since 15years ago.(7) Since the most important or the main factor of decrease or increase of organizations productivity is human resource, so, one of the problems which pioneer organizations managers will deal with in coming decades is effort for increasing the work productivity of employees.(2) So, Human force is the most important factor in organization productivity improvement(3) and also the most valuable and wrathful capital and organization resource. The importance of human force has been proved as the most important factor in operating chain of each organization. The organization which have had great successes, have followed this issue(3). In comparison with members of Asian Productivity Organization, the average development of human force productivity indicator has been 2.03% during the years 2000 to 2006 that Iran is at the ninth rank between 14countries which are members of Asian Productivity Organization.(3) Information about the productivity level of employees causes their productivity improvement. On the other hand, a great change will be happened in their process by increasing the service and production volume. Ultimately this process will help to make the enormous purposes of organization happened.(1) Work force productivity is one of the main resource of economic development ( and with the changes in added values of parts) in Iran, not only human force must give better services in production process, but they should be more careful and delicate about using other production factors, so other factors achieve better productivity,too. Therefore, human force role especially expert and proficient human force is really important in a coherent and integrated system to again better purposes in economic development.(4)

#### **Effective factors on decrease of human force productivity:**

Discrimination between employees cause of weak management, job insecurity, not being successful

and reluctance to planning mid-term or long-term, Not suitable work environment, lack of attention to employees necessities, Not controlling and instability in controlling plans, inconsistency between the major and the job, not using the expertise in related job, the lack of management plan, lack of training, inconsistency between individual and job intelligences, supervisor inefficiency, current job disinterestedness and frequent transfer of human force, human force inflation.(5)

**Effective factors on increase of human force productivity:**

Desirable and accurate behavior of leaders and managers, preparing necessary conditions of job progress for everyone, training course for employees, having clear and specific tasks, directions and rules for employees, giving sufficient authority to employees, recruiting experts and professional people, partnership of employees in determination and codification of purposes and plans, high quality of work life.(5)

**Different views about productivity:**

Engineers know productivity improvement as working more with the least expense. Scientists know productivity improvement as working intelligently and intentionally. Managers know productivity improvement as achieving all things together. Economists know productivity improvement as producing more products with using the available resources and facilities ( effective use of production factors). Finance managers know productivity improvement as gaining more profit. In philosophers’ opinion,

productivity improvement is knowing that the best function has been done.(4) For productivity improvement, effective factors on productivity must be recognized before any other action. Economists, organizations, and international institutions have mentioned different elements about it such as management and workers relations, mental and social conditions of work and workers unions activities (ILO, 1981), work behavior, management type, work unions effect, government roles and job security ( Sumanth,1997), work motivation of employees, methods and current system improvement, work circulation and changes in pressure level of work, job security and income ( Ruben &Lerman , 2005), workers behavior relations ( Kuby&Xie, 2001), work force variety ( Abdel-Rezek@et al, 2007) Wage rate ( Liu & Sakamoto, 2005), Wage level ( Forth &Omahoy, 2003), skill (Dupuy& Grip, 2006). Generally, factors such as frequent wok training of managers and employees, employees motivation improvement for better and more work, creation of appearance background and creativity innovation of managers and employees, establishment of a payable system based on performance and establishment of a punishment and encouragement system, work conscience and social discipline, evolution in system and methods which have the main and delicate role, sovereignty reinforcement organization policy domination over the affairs and thrift has been known as effective factors of productivity.(6) A lot of models have been considered to increase the human force productivity in different levels. Following models can be mentioned:

row	model	component
1	Ansari- Ranani model, 1388	1. motivation ( human necessity, work motivation, feedback, affair evaluation) 2. reinforcement ( employees training, background of creativity appearance, employees partnership, available and sufficient resources) 3. work life quality ( employees communication system, employees supervising method, human factor engineering) (2)
2	Canon model	Conditioning system, service and reward system, adequate monthly income, job extraordinary options and job advantages, work force training and development, work condition improvement, employees welfare, team working, suggestions system and job partnership and circulation of employees.
3	Mehrabian	Organization support, leadership method, reinforcement, decisions credibility, employees tendency and motivation, clarification and documentation, organization culture, organization structure, innovation and creativity, environmental conditions.(3)

4	Alvani and colleagues	Leadership method, motivation, competitiveness morale, mental and corporeal situation, training, experience, innovation and creativity, population characteristics.(9)
5	Coreng Ho	Reinforcement, knowledge level, motivation, training, experience, work plans, management and leadership policies, paying methods and physical environment.(3)
6	Soltani 1384	Frequent job training of managers and employees, making the employees motivated, making the background of creativity appearance, suitable system establishment of paying, establishment of encouragement and punishment system, work conscience and social discipline
7	Sedighiani and colleagues, 1388	Employees training, service compensation, organization structure, organization culture, employees partnership (1)
8	NosratPanah and colleagues 1391	Motivation factors, leadership methods, creativity and innovation, training, competitiveness morale (7)
9	Model of Kit Dios, John New Storm	Leadership quality, mutual trust between worker and employer, mutual organization communications, fairly awards, employees partnership in controlling the organizations affairs, development and progress possibility for employees.(10)
10	CREST model	C ( communication), R ( respect), E ( enthusiasm), S ( support), T ( training).
11	Model of Hersey and Gold Smith	P ( performance), A ( ability of doing a task successfully), C ( Clarity in realizing the acceptance of work method, location and the way to do it), H – organization support ( the support which employees need to complete their effectiveness.), I – incentive ( motivation and tendency to do the task), E – evaluation ( judgment system about how to work), V – validation ( being suitable, rules and legitimacy of manager decision), E – environment ( a group of effective factors of external organization) (10)
12	Shebard model	Wide partnership of employees, mutual trust, revision in supervisor role, improvement of employees responsibilities(10)
13	Josef Pontey model	Employees training, good relations between employee and employer, preparing the job satisfaction facilities (10)
14	Nazari 1387	Motivation, training, partnership in decisions, skill, job recognition (11)

### RESEARCHING METHOD

It is a descriptive – analytic and correlating research which has been done periodically in 1393. Data was collected by the researcher-made questionnaire which was assessed by instructors and experts’ ideas. Its permanency was also estimated desirable by using a pilot model of 30 experts of region of army staff of medical science of Kermanshah and Keronbach Alpha test equaling to 769. Data was analyzed by spss21 software. Statistical community was the total staff of region of army staff of medical science of Kermanshah and the volume of sample was estimated equally 165 people by Cocran formula that 6people didn’t answer the questionnaires.

Results show 36.5% of participants were men and 63.5% of them were women. In terms of age, 24.5% of them were under 25 years old, 58% of them were between 26-35, 15.1% of them were between 36-45 , 1.9% of them were over 46. In terms of marital status, 34.5% of them were single and 65.5% of them were married. In terms of education, 23.9% of them had diploma, 32.7% of them had associate degree, 40.9% of them had BS/BA and 2.5% of them had MS/MA or higher degrees. In terms of work experience, 20.8% of them had under 5-year experience, 25.2% of them had between 6-10-year experience, 33.3% of them had between 11-15-year experience, 13.2% of them had between 16-20-year experience and 7.5% of them had over a 20-year experience.

### RESULTS

**Table1:** average and standard deviation of aspects of suggestive model

number	standard deviation	average	Productivity aspects of human resources
159	3.71103	11.0818	motivation
159	26.55970	13.3459	Training and reinforcement

159	3.53799	11.4969	Paying system
159	3.85420	12.1572	Organization culture
159	3.23917	11.9623	leadership
159	3.43183	12.0314	Employees partnership
159	3.33318	11.5472	Work life quality
159	3.13387	12.4906	Organization structure
159	3.47750	11.2893	Managers support
159	3.66344	11.0566	operation
159	36.80822	118.4591	productivity

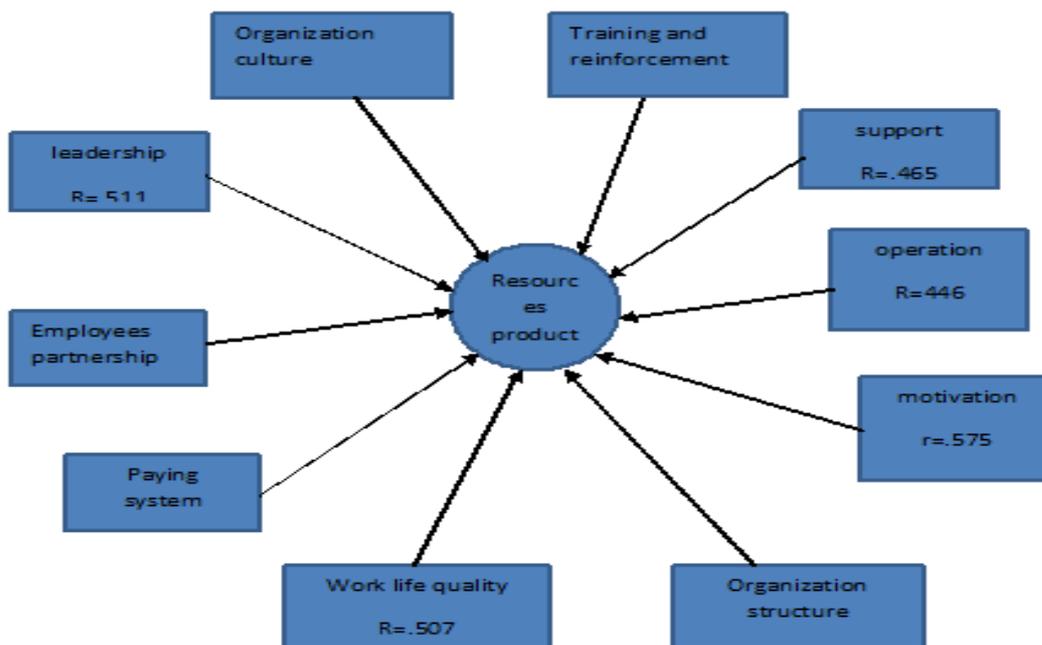
**Table1** shows that aspects of employees training and reinforcement, organization structure, organization culture and employees partnership have the most averages and standard deviations.

**Table 2:** The level of correlation and relation between productivity and the aspects of suggestive model

productivity	operation	support	Organization structure	life quality	Employees partnership	leadership	Organization culture	Paying system	Training and reinforcement	motivations	aspects
.575 .000	.328 .000	.463 .000	.561 .000	.542 .000	.562 .000	.493 .000	.577 .000	.684 .000	.110 .083	1 159	Motivation- R sig
.780 .000	.071 .187	.033 .342	.051 .263	.048 .273	.063 .215	.066 .203	.063 .215	.104 .096	1 159	.110 .083	Training and reinforcement- R sig
.556 .000	.290 .000	.445 .000	.499 .000	.483 .000	.442 .000	.519 .000	.685 .000	1 159	.104 .096	.684 .000	Paying system R sig
.507 .000	.262 .000	.398 .000	.579 .000	.425 .000	.389 .000	.498 .000	1 159	.685 .000	.063 .215	.577 .000	Organization culture R sig
.511 .000	.402 .000	.385 .000	.498 .000	.545 .000	.589 .000	1 159	.498 .000	.519 .000	.066 .203	.493 .000	leadership R sig
.520 .000	.401 .000	.437 .000	.602 .000	.623 .000	1 159	.589 .000	.398 .000	.442 .000	.063 .215	.562 .000	Employees partnership R sig
.507 .000	.424 .000	.348 .000	.644 .000	1 159	.623 .000	.545 .000	.425 .000	.483 .000	.048 .273	.542 .000	life quality R sig
.530 .000	.381 .000	.501 .000	1 159	.644 .000	.602 .000	.498 .000	.579 .000	.499 .000	.051 .263	.561 .000	Organization structure R sig
.465 .000	.671 .000	1 159	.501 .000	.348 .000	.437 .000	.385 .000	.398 .000	.445 .000	.033 .342	.463 .000	support R sig
.446 .000	1 159	.671 .000	.381 .000	.424 .000	.401 .000	.402 .000	.262 .000	.290 .000	.071 .187	.328 .000	operation R sig
1 159	.446 .0000	.465 .000	.530 .000	.507 .000	.520 .000	.511 .000	.507 .000	.556 .000	.780 .000	.575 .000	productivity R sig

Based on the results of table 2, there is a positive and meaningful relation between productivity aspects and productivity, motivation and aspects ( paying system, organization culture, leadership, employees partnership, life quality, organization structure, support, operation), but there isn't a relation between motivation and training and reinforcement, or between reinforcement and productivity aspects. There is a positive and meaningful relation between paying system and aspects (motivation, organization culture, leadership, employees partnership, life quality, organization structure, support, operation), but there isn't a relation between paying system and employees training and reinforcement. There is a positive and meaningful relation between organization culture and aspects (paying system, motivation, leadership,

employees partnership, life quality, organization structure, support, operation), but there isn't a relation between organization culture and employees training and reinforcement. There is a positive and meaningful relation between leadership and aspects (motivation, paying system, organization culture, employees partnership, life quality, organization structure, support, operation), but there isn't a relation between leadership and employees training and reinforcement. There is a positive and meaningful relation between employees partnership and aspects ( leadership, motivation, paying system, organization culture, life quality, organization structure, support, operation), but there isn't a relation between employees partnership and employees training and reinforcement. There is a positive and meaningful relation between work life quality and aspects ( paying system, organization culture, leadership, employees partnership, motivation, organization structure, support , operation), but there isn't a relation between work life quality and employees training and reinforcement. There is a positive and meaningful relation between organization culture and aspects ( paying system, organization culture, leadership, employees partnership, life quality, motivation, support, operation), but there isn't a relation between organization culture and employees training and reinforcement. There is a positive and meaningful relation between support and aspects ( paying system, organization culture, leadership, employees partnership, life quality, organization structure, motivation, operation), but there isn't a relation between support and employees training and reinforcement. There is a positive and meaningful relation between operation and aspects ( paying system, organization culture, leadership, employees partnership, life quality, organization structure, support, motivation), but there isn't a relation between operation and employees training and reinforcement.



**CONCLUSION:**

Relatively high correlation between productivity aspects show dynamism, practicability and usefulness of the model. With the use of this model, results showed that there is a positive and meaningful relation between productivity aspects and productivity and the correlation between them

is positive and relatively high. It shows that managers pay attention to human resources promotion and increase at Medical Science University of Kermanshah. The results also show that there isn't a relation between productivity aspect and employees training and reinforcement (disapproval of the relation) which shows the

shortage of training hours for employees and lack of enough attention of Medical Science University to employees training and reinforcement. It seems necessary to pay attention to employees training and reinforcement.

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